

Thank you Mr. Lake, ~~Ms Taylor~~, Ms Cohenour, and members of this Taxation committee.

My name is George Hart. I'm from Missoula, graduated from Loyola in 1969, and finished college in Spokane. I completed a career of federal service in 2005, and returned to Missoula with my wife, also a ~~native~~ ^{original.} Montanan. Now, I'm an underemployed farmer, living on a fixed income supplemented by my wife's wages. Currently we heat our home with gas. In November gas cost \$162, in December, gas cost us over \$220. We know January *won't* be better; each winter has been like this. My research into alternative means of heating our home brought me to you today.

Some officials in Missoula suggested that I look into solar hot water heating, or geothermal heating. Those heating systems cost \$10,000 to \$20,000 and more, just like masonry heaters. Each of those systems works differently. For me the most important difference is what I would have after it was installed. Solar is going to produce the most hot water and heat during the summer, when I don't exactly need it. It's architecturally challenging, and our house is not well situated for it. Geothermal would produce a constant, gentle heat, but requires electricity to run and has a furnace to eventually replace. Both these system have mechanical parts that can fail, extensive wiring and piping which is subject to deterioration and damage, and require upkeep. Each adds to an electricity bill, even while they reduce the gas bill. Even pellet stoves use \$9 for electricity per month for their operation, have expensive parts that can fail, and they stop working when the power

fails. These maintenance costs add a burden to the budget, and compare unfavorably to a masonry heater that would last 90 years and require only rare chimney cleaning. No electricity is used, cheap fuel is locally available and most of the construction materials are found in Montana.

Catalytic wood stoves and pellet stoves aren't pretty, but they cost less, and can provide considerable heat. But they each have down sides, when compared to masonry heaters. Routinely, catalytic stoves burn at 72% efficiency and pellet stoves burn at 78% efficiency (some, up to 85% efficiency). The heating qualities of wood stoves rapidly diminish when combustion ends (like, over night). **Masonry heaters commonly reach a combustion efficiency of 90% and provide ongoing heat for hours after the burning.** This means their owners haul less wood, burn less wood (for more heat), and pollute the air much less than our wood stove using friends. The literature suggests a masonry heater might get through a season with about a cord of wood, while *other* wood burners could require more than three cords. I'd rather cut the wood myself, to reduce the expense to a tank of gas, but even if I pay \$200 for that cord, I'm way ahead of my current heating costs. Most homeowners who use a pellet stove as a main source of heat use two to three tons of pellet fuel per year. One ton of pellets is equivalent to approximately 1.5 cords of firewood, and today can cost \$225. I believe that the only pellets produced in Montana come from the small mill in Superior, so pellet fuel is largely imported from out of state. Firewood grows throughout Montana, and is available at very low cost. Home heating is a beneficial use for the beetle killed trees that would otherwise go to waste or up in smoke. The Bitterroot Forest sold permits for nearly 6000

cords this year. People want to heat with wood.

The EPA requires that *certified* stoves have particulate emissions limits of 7.5 grams per hour for noncatalytic stoves and 4.1 grams per hour for catalytic stoves. Pellet stoves do not *require* certification but just over 26% of the 42 models that the EPA did certify last November had emissions rated at or above 2.5 grams per hour, the highest being rated at 6.6 grams per hour. Masonry heaters have emissions ^{averaging} ~~as low as~~ 2.8 grams per hour. They are effective heaters while burning for less than four hours daily, creating a fraction of the emissions of pellet stoves. The EPA states: “**masonry heaters currently do not require certification; since their fires are small and burn hot, they produce far less (far less) smoke than a fireplace or wood stove.**”

I could go on, as Mark Twain did about these heaters, because I really like what I know about them, but I will close by stating the fundamentals. Masonry heaters use more Montana resources and labor than other wood burning devices. They outlast every other heating method, for less cost. They burn wood more efficiently, reduce greenhouse gas emissions more effectively and burn less wood (make less smoke) for more heat than other wood burning devices. They add value to homes by their function and their appearance. They give a value to wood that might otherwise be burned as waste or slash. The purpose of the \$500 tax credit was never to save the state's money, but to encourage use of our state's renewable resources, and wean us from imported energy sources. Masonry heaters do this *better* than the other listed wood burning devices. Masonry heaters deserve your vote. They will serve Montanans well, as you do. Thank you all.